Work Plan Calendar Year 2008

Cooperator:	Kansas Department of Agriculture			
State:	Kansas			
Project:	Light Brown Apple Moth Survey			
Project Coordinator:	Laurinda Ramonda			
Agreement Number	08-8453-0014-CA			
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This Work Plan reflects a cooperative relationship between the Kansas Department of Agriculture (KDA) and the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ). It outlines the mission-related goals, objectives, and anticipated accomplishments as well as the approach for conducting a Light Brown Apple Moth (LBAM) survey and control program and the related roles and responsibilities of the Kansas Department of Agriculture and USDA-APHIS-PPQ as negotiated.

I) OBJECTIVES AND NEED FOR ASSISTANCE

Damage from the Light Brown Apple Moth is caused by larval feeding on the foliage, buds, shoots, and fruits of host plants. The larvae feed mainly on the fruit surface, often where a leaf is tied to the fruit or between fruits, which causes the formation of large irregular blemishes. Fruit damage has the greatest economic impact.

In Australia and New Zealand, LBAM is a serious pest of pome and stone fruits and of many other horticultural crops, including grape vine, citrus, kiwifruit, berry fruits, The need to identify the range of this pest is great and without funding the Kansas Department of Agriculture will be unable to participate in the national trapping survey for the Light Brown Apple Moth.

Early detection and containment of this pest is of great importance. The purpose of the survey will be to identify high risk areas such as, nursery stock, landscaped areas with ornamentals, and areas with vineyards or orchards.

II) RESULTS OR BENEFITS EXPECTED

Early detection and containment of the Light Brown Apple Moth are of significant importance. The economic impact of this pest could be detrimental to the wine and orchard industry of Kansas. Receiving funding for this national survey to set traps would improve the odds of eradication and containment success. Benefits of early detection could lessen the severity of the cost to nursery, vineyard and orchard owners.

The nursery and orchard industry could have stock rejected by other states as a result of an infestation. Loss of markets, lost customer confidence, and quarantines enacted by other states could cost the industry and the states involved millions.

This survey will provide the Kansas Department of Agriculture, USDA-APHIS-PPQ, and surrounding states with information regarding the status of this pest. The information can be used to determine appropriate response actions if positive finds are confirmed by USDA.

III) APPROACH

What is the plan of action or approach to the work?

Large Delta Traps will be set at selected sites on host plants at height of 1 to 1.5 meters. The lure will be a female sex pheromone consisting of (E)-11-tetradecenyl acetate and (E,E)-9,11-tetradecadienyl acetate used in 20:1 ratio at a 3 mg dose per septum. The septum is placed on the sticky card at the bottom center of the trap.

Traps should be checked every two weeks and lures should be changed every six weeks. Traps with removable bottoms or inserts should be changed as needed.

Nurseries should have at least 2 traps per site at a distance greater than 50 meters apart. For very large nurseries (>20 acres), larger numbers of traps can be used. Traps can be within or on the perimeter of nurseries.

Urban and suburban areas should be trapped in a relatively uniform grid to allow for 1 trap per square mile.

Orchards, vineyards and other host crop production areas should use 1 trap per 5 square miles or per farm for orchards, vineyards, and major crop hosts such as, alfalfa, beans (broad), clover (red and white), hops and potatoes.

Field sorting of brown moths of 5-7 mm range will occur on traps. Traps may be discarded in the field if they are 1) are devoid of moths, 2) contain moths of distinctly different coloration than LBAM, or 3) contain brown moths larger or smaller than the 5-7 mm range of LBAM.

After appropriately sized and colored moths are found, the piece of the sticky card containing the suspect Tortricidae or similar moth will be cut out. Then the piece of trap will be placed in a vial or if more than one moth is found the whole trap card can be forwarded for identification. If sending whole sticky traps, fold them into a triangle and put a rubber band around them or tape to keep them from coming open during shipment.

Any specimens sent for identification must be accompanied by a completed PPQ form 391. Label each trap piece, vial or whole trap with specimens with the trap number and collection number. These need to be forwarded within one week of collection. Mark outside of package with the words: "LBAM Survey". Make sure specimens are well protected.

Send specimen by regular mail or overnight carrier to PPQ identifier.

Please send an e-mail notification with the overnight carrier tracking number to identifier, the SPHD, and SPRO of your state along with notification to ppq.nis.urgents@aphis.usda.gov that suspect LBAM specimens are being forwarded, and how many, for confirmation.

A. The Cooperator and APHIS Mutually Agree to/that:

- Work together in carrying out field surveys, trapping, identification and data collection.
- Utilize Cooperator and APHIS program funding, as outlined in the Financial Plan, within the authorized parameters to support survey and detection.

1. What is the quantitative projection of accomplishments to be achieved?

- Sampling will be starting in July 2008 for 3 months.
- Location will be documented by GPS coordinates.
- Survey data will be entered into ISIS and NAPIS database.

B. The Cooperator will:

Set 50 traps in high risk areas for 3 months.

1. By function, what work is to be accomplished?

- The 2008 Light Brown Apple Moth Survey guidelines will be followed for trapping of this pest.

2. What resources are required to perform the work?

- Temporary employees, vehicle, fuel, GPS and/or PDA units and computers.

3. What numbers and types of personnel will be needed and what will they be doing?

- At least 1 temporary employee and KDA staff where needed will be setting and checking traps.

4. What equipment will be needed to perform the work?

a. The cooperator will provide GPS and/or PDA units, vehicle and

computers.

b. APHIS will provide traps and lures.

c. Equipment that will be purchased with APHIS funds will be any supplies not provided by APHIS.

d. The equipment will be used to hang, check and remove traps and specimens.

e. The equipment will be maintained at KDA for other surveys upon the termination of the agreement/project.

5. **Identify information technology equipment, e.g., computers, and their ancillary components.**

- GPS and/or PDA units to document locations
- KDA computers with internet to enter data
- Digital cameras

6. **What supplies will be needed to perform the work**

a. What supplies will be provided by the Cooperator?

- GPS units
- PDA units
- Computers
- Digital cameras

b. What supplies will be provided by APHIS?

- Traps
- Lure

c. What supplies will be purchased in whole or in part with APHIS funds?

- Vials for specimens
- Alcohol for specimens

d. How will the supplies be used?

- Trapping of Light Brown Apple Moth

e. What is the proposed method of disposition of the supplies with a cumulative value over $5,000 upon termination of the agreement/project?

- N/A

7. **What procurements will be made in support of the funded project and what is the method of procurement (e.g., lease, purchase)?**

- Supplies for support in trapping
- These will be purchased through the KDA fiscal department

8. **What are the travel needs for the project?**

   - Travel will be required to survey sites with a rental vehicle or KDA vehicle. The KDA Plant Protection and Weed Control Plant Program Manager is the approving official. Costs are included in the financial plan.

9. **Reports**:

   a. Submit all reports to the APHIS Authorized Department Officer's Designated Representative (ADODR). Reports include:
      1. Narrative accomplishment reports in the frequency and time frame specified in the Notice of Award, Article 4.
      2. Financial Status Reports, SF-269, in the frequency and time frame specified in the Notice of Award, Article 4.

10. **Are there any other contributing parties who will be working on the project?**
    a. List Participating Agency/Institution: KDA, APHIS
    b. List all who will work on the project: KDA, APHIS
    c. Describe the nature of their effort: Trapping and site selection
    d. Contribution: Site selection and setting traps, checking traps and removal of traps.

C. APHIS Will:

Assist, if needed, with traps. Assist with data entry into ISIS.

1. **What equipment will be needed to perform the work?** Include major items of equipment with a value of $5,000 or more.

   - Large delta traps
   - Lure

   a. Will Equipment be loaned or provided by APHIS? Yes
   Yes, please list:

   Lure and traps will be provided by APHIS

   b. How will the equipment be used?

   For setting traps

IV) GEOGRAPHIC LOCATION OF PROJECT

The trapping will take place in eastern Kansas. Emphasis will be placed on higher risk areas for the Light Brown Apple Moth. Identification of high risk sites will be selected. Site selection will be based on nurseries, landscaped areas, orchards and vineyards.

A. Many types of terrain will be involved from rural to urban areas.

B. Some areas might have disruption through human contact.

D. Identify the kind of data to be collected:
Data collected will help identify the possible movement of the Light Brown Apple Moth. It will also help to identify the high risk areas for this pest.

D. All survey data including GPS survey coordinates will be entered into ISIS and NAPIS databases. Survey data includes but not limited to date trap was set, when it was checked and picked up, county and any problems. Pests will be checked and verified by USDA, APHIS, PPQ personnel.

F. Criteria to evaluate the results and successes of the project:

1. Pest detection survey and outreach activities completed.
2. All data collected from the pest detection surveys is entered into ISIS and NAPIS databases.

G. Methodology used to determine if the results and benefits are achieved:

1. Review of the ISIS and NAPIS database to ensure that data from the pest detection activities has been entered.
2. Review the accomplishment reports, supporting outreach materials (if applicable), and maps.

V) DATA COLLECTION AND MAINTENANCE

A. Data Management:

All survey data from cooperative agreements involving pest surveys will be entered into the NAPIS databases.

a. First record for the State and/or County will be entered within **48 hours** of confirmation of identification by a qualified identifier.
b. All other required records, both positive and negative survey data, must be entered **within two weeks** of confirmation.
c. All records are to be entered into the NAPIS database by **December 1** of the year of survey, so these data can be included in the yearly Plant Board Report.

All survey data from federal cooperative agreements involving pest surveys, will be entered into an APHIS, PPQ approved database. The State Plant Health Director, or his/her designee, is responsible for assuring data quality.

All survey data from this cooperative agreement will be entered into ISIS database.

a. Survey data and diagnostic results will be entered into the national Integrated Survey Information System (ISIS) database as close to real time as possible, including both positive and negative results.
b. All data elements will be provided nationally and will be entered into ISIS.
c. Data management processes and information will be provided nationally.

VI) TAXONOMIC SUPPORT

Suspect LBAM specimens will be sent to a PPQ identifier.

Survey Collection Details: (Total Number of Trap Collections= Number of Sites X Number of Traps X Total Number of Visits)

Target Species	Survey Dates (Starting-Ending)	Number of Visits	Number of Traps/Visual surveys	Total Number of Collections
Light Brown Apple Moth	July 1-October 1	7	50	140